Illinois Department of Transportation

Memorandum

To:	All Bridge Designers	98.4
From:	Ralph E Anderson	Ralph E. Anderson
Subject:	Side Mounted Steel Bridge Rail	
Date:	July 15, 1998	

The side mounted steel bridge rails provided in the Bridge Manual were developed for use with precast prestressed concrete deck beams and are not used with cast-in-place construction for structures under the jurisdiction of the Department. However, side mounted rails are occasionally utilized with cast-in-place concrete decks and slabs for bridges constructed by local agencies. When side mounted steel bridge rail is used with cast-in-place construction, the design plans should indicate that the studs of the rail post anchor devices are to be placed below the reinforcement bars located in the top of the concrete deck or slab.

To insure that anchor device studs are properly positioned relative to top reinforcement bars, it is recommended that the following note be placed on the superstructure details sheet adjacent to the cross section of a cast-in-place reinforced concrete deck:

> Reinforcement bars in the top of the deck may be placed with a 40 mm (1 ½ inch) minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

For cast-in-place reinforced concrete slabs, the designer must consider the location and size of the edge beam reinforcement bars in relation to the anchor device studs and specify details that will insure that the studs are located below the reinforcement bars.

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